

Notice of Allowability

Application No.

10/644,166

Examiner

Fred Tzeng

Applicant(s)

SUTARDJA ET AL.

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/20/2003.
2. ☒ The allowed claim(s) is/are 1-42.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 8/20/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with attorney, Mr. Eric Janofsky, on September 13, 2005.

The application has been amended as follows:

Claim 36 is amended as following:

A computer program embodied in a computer-readable recording medium ~~embodying instructions~~ executable by a computer ~~to~~ for determining the location of the center of a servo track ~~embodied in a recording medium~~, wherein the servo track comprises servo data comprising one or more synchronization symbols, and wherein a waveform is produced in a head as the head moves across the servo track, the computer program comprising:

determining an estimated location of a peak amplitude of the waveform with respect to a plurality of samples of the waveform, wherein the plurality of samples of the waveform comprises one of the synchronization symbols;

determining a sampling phase defined by a number of the samples between one of the synchronization symbols and a predetermined one of the samples of the waveform;

determining a compensation amount based on a compensation curve and the sampling phase;

determining a refined estimated location of the peak amplitude of the waveform based on the estimated location of the peak amplitude of the waveform and the compensation amount; and

determining the location of the center of the servo track based on the refined estimated location of the peak amplitude of the waveform.

Reason for Allowance

3. The following is an examiner's statement of reasons for allowance:

Claims 1-42 are allowable over the prior art of record because none of the prior art of record teaches or fairly suggests a demodulation compensation system for spiral servo tracks in a hard disk drive, wherein the demodulation compensation system comprising: a sampler adapted to sample a waveform produced as a head moves across a servo track, wherein the produced samples of the waveform including one of the synchronization symbols; and a processor adapted to first determine an estimated location of a peak amplitude of the waveform with respect to the plurality of samples of the waveform, determine a sampling phase defined by a number of the samples between one of the synchronization symbols and a predetermined one of the samples of the waveform, determine a compensation amount based on a compensation curve and the sampling phase, determine a refined estimated location of the peak amplitude of the waveform based on the estimated location of the peak amplitude of the waveform

and the compensation amount, and finally determine the location of the center of the servo track based on the refined estimated location of the peak amplitude of the waveform.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication from the examiner should be directed to Fred Tzeng whose telephone number is 571-272-7565. The examiner can normally be reached on weekdays from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-7565 for After Final communications.

6. Informal regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

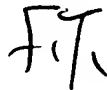
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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred F. Tzeng



September 07, 2005



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600